

AMENDMENT UNDER 37 C.F.R. § 1.116
Application Serial No. 10/830,017
Attorney Docket No. Q81187

REMARKS

Upon entry of the present Amendment, claims 1, 2, 16, 33-46, and 48-79 are all the claims pending in the application. Claims 1, 2, 16, 38 and 48-50 are amended, and new claims 72-79 are added. No new matter is presented.

To summarize the Office Action, claim 38 has been objected to for informalities, claims 1, 2, 16, 33, 36-38, 40-41, 47-48, 51-66, and 70-71 have been rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Kamei et al. (U.S. Patent No. 6,011,887, hereinafter “Kamei”), and claims 34-35, 39, 42-46, 49-50, 67-69 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kamei. The outstanding objection and rejections are addressed below.

Claim Objections

The Examiner objects to claim 38 as allegedly being unclear. Applicant hereby amends claim 38 to recite the flexible material of the buffer layer is a solid and non-perforated elastic material. Reconsideration and withdrawal of the objection is therefore requested.

Claim Rejections - 35 U.S.C. § 102(b)

As noted above, claims 1, 2, 16, 33, 36-38, 40-41, 47-48, 51-66, and 70-71 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by Kamei. Applicant respectfully traverses and submits that Kamei fails to teach or suggest all the features of these claims, as evidenced by the following.

With respect to independent claim 1, Applicant submits that Kamei fails to teach or suggest *at least* the features of the central reinforcing element (1) comprises a central core (2) surrounded by an outer sheathing (3), the outer sheathing (3) is mechanically coupled to the central core (2) by contact with the central core (2), the modulus of elasticity of the outer sheathing (3) being less than the modulus of elasticity of the central core (2), and the feature of the layer of optically fibers (4) is mechanically coupled to the central reinforcing element (1) such that the optical fibers (4) are at least partially impressed in the outer sheathing (3), as recited.

In this regard, Applicant notes that the features of the central core and the outer sheathing have been partially incorporated from dependent claim 47, which is cancelled without prejudice or disclaimer. Further, in rejecting claim 47, the Examiner alleges that tension member 11 and pipe 12 of Kamei corresponds to the central core and outer sheathing of the claimed optical fiber cable, respectively. *See* Office Action at page 3.

However, Kamei simply teaches an optical fiber in which a soft magnetic powder 141 is mixed with organic binding agents 142 to form “composite magnetic bodies”, which are provided to absorb undesired radiant noise radiated by tension member 11. *See* Kamei at col. 3, line 66 - col. 4, line 7. As taught by Kamei, reinforcing wires of an optical fiber cable may experience electromagnetic induction such that noise may ride on the reinforcing wires, which, if not shielded, may cause electromagnetic interference. *See* Kamei at col. 2, lines 7-23. Thus, Kamei merely teaches that the composite magnetic bodies in the buffer layer 14 act as an electromagnetic shield to prevent such undesired noise.

By contrast, claim 1 defines a optical cable in which the optical fibers surround a central reinforcing element comprised of a central core and an outer sheathing, in which the modulus of elasticity of the outer sheathing is less than the modulus of elasticity of the central core. Moreover, claim 1 recites that the layer of optical fibers is mechanically coupled to the central reinforcing element such that the optical fibers are at least partially impressed in the outer sheathing. By virtue of the mechanical coupling of the optical fibers and the central reinforcing element, the central reinforcing element assists the optical fibers in better accommodating variations in the longitudinal dimensions of the cable.

On the other hand, Kamei fails to suggest mechanical coupling, as claimed. Rather, Kamei provides composite magnetic bodies in the buffer layer to absorb undesired electromagnetic signals from the tension member. Moreover, Kamei merely teaches that reinforcing wire 11 is surrounded by pipe 12, but fails to suggest anything regarding the modulus of elasticity of either of these elements. As a consequence, there is no suggestion that the fibers in Kamei are in any way impressed in the pipe, and Kamei therefore fails to suggest mechanical coupling of the optical fibers with the outer sheathing of the central reinforcing element, as recited by claim 1.

As Kamei fails to suggest all the features of claim 1, reconsideration and withdrawal of the rejection of claim is requested. Further, Applicant submits that the above arguments are likewise applicable to independent claims 2 and 16, which recite analogous features that are deficient in Kamei at least for the reasons set forth above.

With respect to dependent claims 33-46, and 48-79, Applicant submits that these claims are allowable at least by virtue of their dependency.

Regarding claim 36, Applicant further submits that this claim is additionally allowable because Kamei fails to teach or suggest the feature of the solid and flexible material of the buffer layer has a Young's modulus at 25° C which is less than 150 MPa. In rejecting this claim, the Examiner alleges that styrene-butadiene rubber has a modulus around 50-100 MPa. *See* Office Action at page 3.

However, as noted above, Kamei teaches that the buffer layer is composed of both a soft magnetic powder 141 and organic binding agents 142. Thus, even assuming styrene butadiene has a Young's modulus of "50-100 MPa", as alleged, this does not reasonably suggest that the composite buffer layer, which further includes magnetic powder, would collectively have a Young's modulus of less than 150 MPa. Reconsideration and withdrawal of the rejection of claim 36 is therefore requested.

New Claims

In order to provide additional coverage merited by the scope of the invention, Applicant is adding new claims 72-79, which respectively depend from independent claims 1, 2 and 16. Applicant submits that claims 72-79 are allowable at least by virtue of their dependency and by virtue of the features recited therein. Allowance of claims 72-79 is therefore requested.

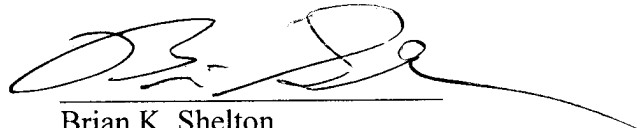
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Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Brian K. Shelton', with a long horizontal line extending to the right.

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